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ABSTRACT

Pertinent research studies, legislative documents, labor market agreements, official reports, and governmental decisions on issues concerning vocational education and training (VET) in Sweden were analyzed in an effort to evaluate the state of coordination of VET in Sweden and the effectiveness of its National Training Board. The findings of the analysis are presented in the nine chapters of this report, which cover the following topics: current trends and analysis of the issues involved (reference materials, current trends, enabling legislation, and new resolutions in 1990); training board structure and composition (including labor market councils and committees); present and planned national training frameworks; finance and financial sources; delivery of training; institutional planning and operation (decentralization, the curriculum in 1991, and supply and demand); administration of private/industrial training; continuing education and training (including education for progression and labor market training), and student testing and certification. A brief history of the development of vocational education in Sweden from 1846 through the 1980s, the results of an evaluation of the vocational value of upper secondary schooling, sample curricula for four integrated upper secondary school programs, and information on the finances and training policy of Sweden's national training board are appended. (MN)

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TRAINING discussion PAPERS

The effectiveness of Training Boards in Sweden

by Stig Granander

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Introduction

The strategy adopted for writing this state of the art paper on co-ordination of vocational training; The effectiveness of national training boards, has been to collect and analyze research studies, legislative documents, labour market agreements, official reports, and governmental decisions on issues concerning vocational education and training in Sweden. Extensive experience from work in the field of vocational education and training, in Sweden and internationally, forms the basis for the views expressed by the author.

Educational policy has formed a natural part of welfare policy which, during the post-war period, has laid the foundation for improved living conditions in Sweden. It has also governed the development and reforms of vocational training during the last few decades. The term "Vocational Education and Training" which has replaced "vocational training" since the 1970s is indicative of the trend in developments and decisions taken on training issues.

This expression reflects the aim of achieving equality in the educational system (and society). The old apprenticeship and vocational training systems have been integrated in the new Upper Secondary Schools (Gymnasieskolan), which take on more than 90 per cent of the yearly cohort. At times the vocationally oriented streams of this system have become the first choice for a majority of students leaving the compulsory nine years of schooling.

The variation in language, frequently using vocational education instead of vocational training, is noted here particularly for comparison with the internationally applied organizational "zones", dividing education from training. These zones are not only verbal but real, reflecting the domains of different ministries and not least, the structure of international organizations.

In this paper the abbreviation "VET" will be used when referring to vocational education and training in Sweden.

There may be sections which are too fragmentary and others must be seen, in the light of the educational reform now in progress. It is hoped, however, that my contribution will initiate further research into the VET and add information to the ILO data bank. Any errors or deficiency in the information given are the sole responsibility of the author.

I. Current trends and analysis of the issues involved

A. Reference materials

Comparing research on general education and that on VET, one will find that there are very few studies made on VET at any Swedish university institution. One exception is a study by Mr Lennart Nilsson, "Vocational education: an historical analysis. The development of the vocational education in Sweden from the ending of the Guild system in 1846 to the 1980's and some reflections on likely future trends." University of Gothenburg, 1981. An abstract of this study to be found as Appendix I to this paper, briefly reveals historical events. The work by Mr Nilsson gives an extensive and thorough review of the developments which led from the former vocational training system to the present VET system.

Another study is that by Mr Rune Axelsson on the "Upper secondary school in retrospective. The view of former students." University of Uppsala, 1989. Abstracts from the Concluding remarks of the chapter on: "The vocational value of upper secondary schooling" and from "Workplace-located upper secondary school education" are set out in Appendix II to this paper.

However, there are several hundred reports available from studies and experimental projects carried out in cooperation between the various vocational training committees, schools and authorities at different levels. Put together this forms a massive amount of information from which conclusions on trends and future demands can be drawn.

There are also comprehensive materials available on VET in terms of curricula and supplements with guidelines on content and methodology of teaching for each stream of VET. The curriculum developed for the Upper Secondary School reform launched in 1970, comprised a general part setting goals and main objectives. The subject distribution and the number of periods were also set for each of the 22 streams. This general part of the curriculum was included in the parliamentary decision on this reform. The NBE was assigned to develop the content of each stream and subject. This work resulted in supplements and lists of equipment for each and a large number of special courses. This and the general part formed the complete curriculum for each stream. Some time-schedules from VET streams are enclosed as Appendix III.

B. Current trends

Each VET reform has always been preceded by thorough investigations, negotiations, and experimental phases. An extensive network of organizations at different levels is also involved. This includes the trade unions, employers associations and teachers' organizations. The Ministry of Education and the National Board of Education involve research institutes, local and regional school authorities as well as their central Associations. Educational planning - like other planning in Sweden - has access to numerous statistical and prognostic instruments. Nevertheless, the accelerating changes and developments in the economy, society and technology, shorten the life cycle of each reform.

The preparatory stage for a VET reform in Sweden stretches over several years. For example; The Upper Secondary School Committee submitted a report in 1981 on "A Reformed Upper Secondary School". The Vocational Secondary Education Reviewing Panel was appointed in 1984 with the task of examining the need for renewal of the then existing VET. The Panel submitted its recommendations to the Government in 1986. Sub-

sequent Bills were passed by Parliament in 1989, December 1990, and June 1991. The implementation of the reform is to be done gradually over a four year period, commencing in the 1992/93 school year.

The last two reforms of VET, in 1970 and 1991, have been part and parcel of the reforms of the Upper Secondary School system,. thus providing the organizational framework for integration of vocational streams and subjects. In principle, the upper secondary school system has the capacity to accept all 16 year olds every year. However, this stage of education is not compulsory, either for the providing local school authority or for the students, but as more than 90 per cent of the students continue in the Upper Secondary School, it may as well be considered compulsory.

It is sometimes suggested that the secondary school reduces unemployment of 16-18 year olds by performing a "storage function" and at the same time providing pre-employment VET. Such statements are of course equally applicable to the liberal arts, social sciences, natural sciences and economics as to the VET streams in the Upper Secondary School.

C. Enabling legislation

Subsequent to the passing of an Education Bill in Parliament, the new Legislation is implemented as follows:

a) The Swedish Parliament (Riksdag) and Government, through the Ministry of Education, define goals and guidelines, issues regulations and Ordinances and give instructions to the national authorities.

b) The National Board of Education (called The National Agency for Education from July 1991) is the Central authority responsible for compulsory schools, upper secondary schools and (below post-secondary level) adult education. Higher education is under the National Board of Universities.

c) Municipal Education Committee and Local Education Authorities have the prime responsibility for education and schools. The Municipal Education Committee decides school policy. The decisions are put into effect by the Local Education Authority and its officials.

D. New resolutions in 1990

In December 1990, Parliament adopted a resolution on the responsibility and administration of the nine-year compulsory school and the integrated upper secondary school system. The resolution implies decentralization of responsibility to the municipal level. The National Board of Education and the County Boards were replaced by a much smaller new authority the National Agency for Education. The state subsidy to education will henceforth be given to municipalities as a lump sum based on the number of students. A Government Bill on content and policy etc called "Growing with knowledge" was adopted in June 1991. See Chapter II for further details.

II. Training Board structure and composition

In this context the term Board has to be given a general and broad meaning. There are several reasons for this. Until July 1991 Sweden had one National Board of Education, employing approx 600 persons. The NBE was abolished in the 1990 reform, aiming at decentralizing decision making on education. The new central authority, called the National Agency for Education has about 200 employees and a different, less detailed command on education. The system of 24 County Education Committees, with regional planning and inspectional functions, were abolished in the same process of decentralization. This gave the Municipal Education Authorities much more latitude for planning and executive decisions on education.

There are also a number of councils, committees and organizations with their own working groups, officials and "Boards" which form the policy and "pressure groups" on VET. This not only influences the decisions, it also implies a sharing of responsibility for governing local training, both in schools and at work places where part of the practical training is carried out.

A. Labour market councils and committees

There are several bodies responsible for cooperation between the different organizations prevalent on the labour market. The Swedish Employers' Confederation, SAF and the Swedish Labour Union Confederation, LO are the two most salient. The Joint Industrial Training Council works under an agreement as a bipartite body dealing with common vocational training issues in the SAF/LO area. As to trade specific matters, there are Joint Vocational Training Committees at the central level of the organizations. For example; The Swedish Engineering Employers' Association and the Swedish Metalworkers' Union, have a Vocational Training Committee under an agreement reflecting the specific conditions applicable to the engineering industry.

At the local level there are the corresponding, trade specific Joint Local Vocational Training Committees. These committees with local representatives of employers' and workers' organizations are expected to discuss and influence VET given in the respective field at the local school.

The role of the Industrial Training Council is stated in its Programme of Action of 1987, as follows: "- to coordinate and inspire the work of the joint vocational training committees and to deal with questions referred to the Council by those Committees, -on questions where agreement and common interests exists, to maintain and promote those interests in relation to ministries, central government bodies and agencies, regional and local vocational training bodies and public opinion."

Cooperative agreements between the social partners have a long tradition. They date back to the 1930s when mutual agreements between SAF and LO on major issues concerning the labour market were reached. In one part of this agreement it was also assumed that it was in the interest of both parties to work together for the formation of a national vocational school system. A National Board for vocational schools was consequently set up under a parliamentary decision in 1944. This National Board existed for two decades, a period during which the vocational training system and schools were established throughout the country. However, not all employers are members of SAF, neither are all salaried workers members of LO, although these organizations are the main actors on the labour market, with frequent participation in

government commissions on education. Several other organizations also take part in discussions on educational issues; for example: The Swedish Central Organization for Salaried Employees (TCO), the Swedish Confederation of Professional Associations (SACO/SR) and the Swedish Federation for Free Enterprise to mention a few.

The close contact between VET and the employment sector has been further strengthened by recent educational reforms. The goal has been to bring school activities closer to working life.

III. National training framework (present and planned)

The goals of vocational training ought to be in principle the same as for general education. However, in the implementation and evaluation of vocational training, the perspective is often limited to the employability of trained people and cost of training only. This is said to illustrate the difference in attitudes and the underlying traditional rating and values of education versus training. This has not been diminished by the upper secondary school, VET reform in 1970, but has perhaps become more visible.

One of the principal motives for the introduction of upper secondary schools in 1971 was to enhance the attraction of vocational education. The credential value of vocational education for post-secondary studies was improved by expanding general subjects and by introducing optional general theoretical subjects for three periods per week. The aim of this was to make VET students eligible and prepared for continued education. However, the vocationally oriented subjects were given no such credit

The planning goals may be summarized in single words like:

- democracy, equality, freedom of choice, self-confidence, cowork-determination, labour supply, growth, efficiency, internationalization and social change.

The operational goals do not span across the whole educational system but vary and are set forth for every single curriculum. These goals are an attempt to describe how to go about achieving the skills, keeping the comprehensive planning goals as far as possible in focus.

A. The 1990 framework

Technical, social and organizational changes in working life have had a major influence on the ongoing transformation of the organization and content of VET. The "modular" principle reflects a concept and need for industrial production as well as services. The fragmentation and strict specialization of jobs in the 1960s and later the automation of manufacturing, called for diversification of skills.

Less specialization was, in fact, also one of the aims of the 1970 reform. However, the vocational streams have now been found to be too narrow and rigid to meet the needs of the 1990s. In all essential respects, the upper secondary school of 1970 still carries a heritage from the previous types of school; grammar school, continuation school and vocational school. The organizational and physical integration brought by the upper secondary school system did not reach its goal of an "equal opportunity to education for everybody".

The repeated practice, at various intervals, to appoint central commissions for inquiry to adapt VET to the ever changing requirements, has become less and less realistic. The adjustments proposed and made, have often been to the conditions of yesterday. It takes too long to change organization and influence the actual school situation. Local influence on the syllabi beyond the centrally decided core of subjects will therefore be necessary.

The present more than 120 VET curricula are now being reduced to 16 programmes with different branches. The syllabi will be designed to give not only broader but also deeper knowledge than today. In addition, they should respond to changes taking place in the industrial structure, in society and the subsequent changes that will be demanded of

schools. It is further envisaged that branches can be drawn up by local decisions. To the greatest extent possible, the different programmes should attract girls as well as boys.

A Government Bill on upper secondary schooling and municipal adult education called "Growing with knowledge" was passed by Parliament in June 1990. It implies:

- Equal rights to education throughout the country
- Young people (up to 20) have a right to have and the municipalities have an obligation to provide upper secondary schooling or individual programmes within the municipality or in another municipality. Education is free of charge to students.
- Upper secondary school - a basis for lifelong learning.
- 16 three-year educational programmes for all students, two for preparatory studies and 14 for vocational training giving broader and deeper knowledge than today's vocational training and better responding to changes in the industrial structure.
- Basic knowledge both in general and vocational subjects.
- A more flexible system with scope for locally determined study profiles.
- Minimum guaranteed teaching time for programmes and subjects.
- A common core of subjects and activities for all programmes: e.g. Swedish, English, civics, religion, mathematics, science, sports and health.
- At least 15 per cent of vocational programmes allocated to work-places.
- The first two years mainly in school and the third year mainly at the work place.
- Individual programmes oriented towards vocational training for students not attending the programme, including apprenticeship.
- All upper secondary school programmes to last for three years.
- The term "stream" to be superseded by programme.
- A stronger position for languages. English to be compulsory in all programmes.
- Emphasis on the importance of environmental questions.
- The Bill lays the foundation for a new strategy for the development and renewal of upper secondary schooling.
- Statutory codification of students' right of participation in the planning of their studies.

IV. Finance

The average annual cost for an upper secondary school student was approximately SEK 30.000 in the mid 1980s. The cost varies a great deal from one stream to another, depending on the equipment needed, number of students per class etc. The VET programmes, with generally 16 students per class and often costly equipment, make the actual cost for a VET student comparatively high. Special state subsidies for VET programmes have been allotted to municipalities. The present trend of decentralizing administration is further accentuated by withdrawal or reduction of State funding at municipal level.

All institutionalized education in Sweden is in principle financed through ministerial and municipality budget allocations. Health care, school meals and most learning materials are free as well.

A. Other financial sources

There is no direct training levy system. However, labour market fees, "Renewal Funds" and taxes related to training are at times, imposed on enterprises. Such arrangements are related to the current economic situation in the country and sometimes become part of the consensus reached between the government and the social partners.

There are also Labour Market Agreements under which a year of training is carried out at the work place. This implies that trainees work in companies under guidance and special wages. The enterprises receive a lump sum amount per student for this training.

Companies' concern for further education and training of their personnel has brought a sharp rise in in-service and in company organized product- or service-related training courses. Large industrial companies sometimes also run their own in-service vocational training programmes. This of course, also implies a considerable financial involvment and contribution to training opportunities.

Subsequent to the legislative rules that education should be free of cost to the individual student, there is no fee paying system in any public institution. Since the full upper secondary school system with VET programmes is available in all sizeable municipalities, fee-paying training has not been viable.

The 1990 reform indicates that the State will provide subsidies, based on the number of students in each type of education, to the municipality, although catering for a smaller share than before. Earlier financial responsibility was more or less equally distributed between the State and the Municipality with an increasing share being financed by the latter.

V. Delivery of training

As appears from what has been said above, practically all basic VET is school-based and primarily used as pre-service education for the 16 to 19 year age group.

The social partners have agreements with provision for finishing training one year after school-based VET. In-service programmes are common in Swedish companies. Programmes in management and administrative matters are frequently arranged as group courses. Training programmes in new applications of the technology are arranged as individual studies or courses. Depending on type of production, level of technology etc., in the company, the programmes vary in duration and content. Hi-tech companies spend an ever increasing share on further training to keep pace with the development of technology.

An important role in the delivery of VET is played by learning materials. Learning materials are considered to incorporate both hardware (tools and equipment) and soft-ware (books, audio-visuals etc). There is fortunately very good access to learning materials well adapted to the VET syllabus. Working groups from the Vocational Training Committees are frequently behind this in cooperation with publishing companies and producers of hard-ware. Laboratory equipment and manuals along with text books and job-instructions are materials priceless to individual learning as well as group studies.

VI. Institutional planning and operation

A. Decentralization

There is at present a general trend for decentralization in all areas of planning for the civil service in Sweden. The move towards decentralized planning and a higher degree of autonomy for education is no exception. This has also been elaborated on above and is most evident in the ongoing reform of the upper secondary school system. Following the decentralization of state administration, many municipalities are also making a thorough reorganization of their administration. This includes a move towards privatization and sub-contracting out services provided by the municipalities.

B. The curriculum in 1991

The curriculum for the new VET is decided centrally and forms part of the educational bill. This principal curriculum constitutes a framework, includes the goals, the 16 different programmes and a core of subjects common to all programmes. The new National Agency for Education will give further principal outlines of syllabi for programmes and branches. However, it is significant that this educational reform provides for local and individual adaptation of the organization and content of VET to meet the actual local need and desire to study.

C. Supply and demand

The balance of supply and demand of adequately trained personnel is always subject to business cycles and the general economic outlook. Educational planning in Sweden is no exception, despite the well developed statistical and other instruments available to planners.

In times of an expanding economy with plenty of job-opportunities, students may prefer to take a job, when leaving compulsory schooling, rather than go on to the optional upper secondary stage and VET. Some VET programmes become less popular and are disliked by students because of the type of activity and the work environment for which the training prepares, no matter how big a demand there is for trained personnel. Other VET programmes become very popular and get more applicants than can be accommodated.

When the economy is slowing down, students become more cautious and business sectors (trades) which are starting to face problems are avoided by new applicants. Some less popular VET streams, however, have been classed as low ranking by the students despite good employment prospects. Delayed specialization by opting for theoretical study routes is becoming more common. This is well and good, as long as the national and the family economy can sustain this and the unavoidable professional training to follow.

VII. Administration of private/industrial training

The 1990 reform of the upper secondary school created a new educational role for enterprises. This involves not only large companies but also small and medium enterprises all of whom have to collaborate in providing individual work experience programmes for each annual cohort of VET students.

Large sectors like the engineering industry have adapted their agreements on vocational training to the new system. The Swedish Engineering Employers' Association and the Swedish Metalworkers' Union have made an agreement for the experimental phase of the new upper secondary school. "Company-located training" in principle defined as: "any vocational instruction or education at elementary, secondary or university level located at a place of work outside the school premises". About 2,000 students yearly are expected to receive practical training in companies within the engineering industry.

In brief the agreement states:

- Training given at the workplace implies that certain defined items of the curricula - items which are best suited to being carried out by companies according to their prerequisites - will be taught in the companies.
- Training given at the workplace is to be conducted according to the curriculum and under the direct guidance of an employed instructor
- Company-located basic training means training and learning of new items. It has to be planned in the same way as training given at the school. When students have reached the set objective within the respective part of the curriculum, they have to go on to the next part immediately.
- The local School Board has responsibility for carrying through the training according to the curricula.
- The school has the responsibility for training and supervising training through vocational teachers who must visit the training places at the companies.
- Both the company and the local trade union are jointly responsible for the introduction of the student at the workplace, general safety instructions, the organization and activity of the company and information on the trade union.

The local vocational committees (see II.A above) are a resource for discussions of company-located training. The work within the local vocational committee is supported by the social partners locally. Members of the committee have necessary time off to carry out their duties.

The Vocational Committee of the Engineering Industry has to exercise supervision over, stimulate and promote development work and the evaluation work at companies.

VIII. Continuing education and training

Adult education in Sweden has a long history dating back to the popular movements at the turn of the century and onwards. Its real breakthrough did not come until the late 1960s and several reforms during the 1970s. Adult education today exists in many different forms, organized by a variety of institutions.

Adult education includes anything from attending a spare-time study circle or taking a folk high school course to studying at upper secondary school level for several years or attending university or college. Company in-house training, trade union courses and educational programmes on radio and television are, of course, an important part of adult education as well. Taking this into consideration, almost one out of two Swedes attends some form of adult learning.

A. Education for progression

The aim as defined in the 1967 Parliamentary decision on municipal adult education is to give adults a second chance for further education, either at basic level to bridge over educational gaps, or to supplement their theoretical knowledge to enter university. This will also remain true for the 1990 reform.

The new (1991) municipal adult education concerned adult education, Upper secondary education and Supplementary education. Experimental work with one years technical education has started.

The rapid development towards a more knowledge intensive working life multiplies the need for and demand on adult education. It seems that a consensus exists, between the social partners, on the need for adult education and re-training to meet new technology and production techniques. To quote from one paper by two organizational secretaries of LO:

- "The education system must be more alive to signals from developments in the employment sector. This can be achieved by keeping the education system better informed about working life, through the social partners.
- Public education must be given sufficient breadth for vocational instruction to be applicable to many different situations. It must also strike a balance between the need for vocational knowledge and knowledge for leisure, community work and general personal development.
- All employees must be given access to continuous learning at work, so as to cope with readjustments of various kinds."

The paper further notes that there is an unfair difference between blue collar and white collar workers regarding access to programmes organized by employers. The paper continues; "There is a danger of manual workers' prospects of "working your way up" to technical duties deteriorating as a result of companies intensifying their demands for formal qualifications. This can create problems both for skilled workers and for companies which fail to utilize and develop manual skills."

However, in Sweden, like elsewhere in the industrialized world, heavy emphasis is given to training and re-training for the industrial sector, while training for the service sector is almost forgotten. As the renewal of the work-force is already small and shrinking with new production technologies being introduced, the negligence particularly for re-training and development for the service sector is astonishing. With a post-industrial era not too far ahead and with signs of industrialization of the production of services by private enterprises rapidly coming into health care and

education, it may be found too late to adjust to the human needs of the service occupations. After all, in Sweden the service sector occupies between three to four-fifths of the total workforce.

B. Labour market training

Labour market (vocational) training forms an important part of adult education. Primarily an instrument to cope with changes in the labour market, this system for vocational training of adults is an integral part of the active labour market policy pursued in Sweden since the 1960s. The goals are several: to reduce unemployment, to contribute to an equitable distribution of income and opportunities and to ensure growth in the economy.

By tradition, labour market policy has also been an important factor for stabilization. The resources allocated for various measures are made to vary in response to economic fluctuations. Active measures like intensified placement services, counselling, vocational rehabilitation and employment oriented training are main activities.

A capacity for adapting production and the work force to new and changing conditions is essential for a small, export dependent country like Sweden. Competitiveness stems from people's knowledge and skill, their willingness to use and develop new techniques in an ever changing working organization. Occupational as well as geographical mobility in Sweden have been encouraged and financed through labour market policy and active measures.

The overall aim of labour market training is to make it easier for the unemployed to acquire new qualifications and skills required by employers. Eligible persons may receive free basic or supplementary training through Employment Services Offices. This also entitles them to a training grant as a cost of living allowance. Requests for training are assessed by the Employment Office and suitable training is identified in consultation with the applicant. Admissions to the Centres are made on a continuous basis and duration of training can vary from a few days to a year or more.

Among the groups receiving training are immigrants, those returning to the labour market following forced or voluntary absence, jobless due to closures, people forced to change occupation due to illness or injury.

The major part of this subsidized training is provided by the National Employment Training Board at its AMU Centres. Until 1986 labour market training was under the National Board of Education jointly with the National Labour Market Board. Vocational training for adults was thus part of the educational system. Following several studies, the government decided to create an independent authority to administer vocational training. The AMU Centres were reorganized under an autonomous body named the AMU Group. Decentralized responsibility and financial accountability signifies the new approach.

The AMU Group comprises a central board with 24 regional agencies. Leading trade unions, employers' organizations, representatives of local government and educational authorities are members of the AMU Board. This tripartite representation - government, employers and employees - is there to ensure consensus on the implementation of public vocational training.

An excerpt from a presentation of the AMU Group concerning its financing and training policy is enclosed as Appendix IV.

IX. Testing and certification

One of the most debated educational issues in Sweden has been the marking system. The debate was not only about the technicalities of marks but with its purpose. Large groups would have preferred a school system with no marks at all. This was in the 1960s. Most of the extensive works by the NBE, commissions and researchers on the marking system since the 1960s though, remained on paper.

However, work by the 1960 Upper Secondary School Commission resulted in the introduction of a five-point relative scale of marks for the upper secondary school, while matriculation was superseded by standardized achievement tests in certain subjects and by upper secondary school inspectors. This in addition to the continuous follow up and observations made by the teacher has formed the basis for the marks given to each student.

The main principle for award of marks according to the relative system assumed that for each subject the average for the whole country should be 3.0. This was expected to be achieved by 38 per cent of the students, mark two and four by 24 per cent each, one and five by seven per cent each. The relative system of marks means that there are no definite requirement for the various marks. A particular mark only indicates the placement in relation to other students. In practice these rules have been difficult to apply fully.

The marking system is once again subject to revision. The 1990 reform of the upper secondary school system implies a result-oriented approach. By the 1991 election, Sweden as in the 1970s, got a non-socialist government. The new government has clearly spelt out their preference for a result-oriented, more detailed marking system. The debate on this is not likely to bring much of a dispute compared to that of the 1970s. Furthermore, Sweden is currently in the process of entering the European Community, which will probably call for adaptation to what is generally practiced or acceptable for free movements of labour and students to and from other EC member countries.

The new National Agency of Education superseding the NBE is responsible for following up and evaluating school activities. This will include not only implementation of the new upper secondary school and adult education, its organization and administration matters but also, as a major task, the overall evaluation of the quality of teaching in different subjects.

For the VET programmes, however, the marks and certificates obtained by the students have up to now, carried less weight compared to the contacts established directly between the employer and the student's teacher, whenever this has been the case.

Appendix I

Abstract from the study by Mr. Lennart Nilsson:

"Vocational education: an historical analysis. The development of vocational education in Sweden from the ending of the Guild system in 1846 to the 1980s and some reflections on likely future trends". University of Gothenburg, 1981.

The first aim of this study is to describe how the vocational school system has developed and how vocational education has changed from the ending of the Guild system in 1846 to the 1980s.

The second aim is to attempt to speculate about the vocational system and vocational education during the last decades of this century, drawing upon the results of the historical review and viewed in relation to the main features of society and working life at the end of the 1970s.

A. Strategy

The historical background will be revealed mainly by means of official reports and documents arising from governmental proposals requiring a vote in Parliament and from parliamentary decisions concerning vocational education during the period from the 1850s to the 1980s. The official reports and documents have been looked upon as "interview objects".

B. Results

It was possible to distinguish four phases in the development of the vocational education system. *The first phase* is the period from the end of the Guild system to the Parliamentary decisions of 1918 concerning the organization of vocational schools for young people. The system was arranged in order to educate young workers in vocational theory and general knowledge. The reforms during this phase are responses to the demands of industrialization combined with a belief in the social reform of work and society as a result of the universal right to vote.

The second phase covers a period from 1920 to 1945. The practical element of vocational education began to be organized in local community vocational schools as a result of unemployment during the 1920s and 1930s. During the later part of the 1930s the socially oriented rationale underlying vocational education came to embrace a wider labour-market orientation. This reorientation resulted in a cooperative agreement between the Swedish Employers' Confederation (SAF) and the Swedish Confederation of Trade Unions (LO) to expand vocational education in industry and crafts. This agreement can be looked upon as a consequence of the absence of laws defining the relationships between apprentices and employers. Social motives very evidently underlie the reforms during the second phase. There is a new combination of social policies and labour-market policies.

The third phase covers the 30 year period from 1946 to 1976. The main suggestion from the 1946 School Commission was that pupils should have the possibility of choosing vocational education during the ninth school year of compulsory schooling. In the middle of the 1950s Parliament decided to increase financial support for the vocational school system. During the 1960s the emphasis was upon creating a system responsive to the demands of the second epoch of industrialization and to social demands for equality between practical and theoretical education at the secondary school level. Vocational education was reorganized to provide a broad rather than narrow initial education with successive specialization from branch orientation to specific job preparation. The work resulted in structural reforms in 1968. During the latter part of the third phase it is possible to recognize a partially new orientation. The main feature was an attempt to create a system in which every secondary school student was involved in both academic and practical education. The main motives underlying the reforms during the third phase were the demands arising from the second epoch of

industrialization and from political efforts to create equality between different forms of education at the secondary school level.

In the future during *the fourth phase* the practical component of vocational education will probably become established firmly outside the schools. During the last part of the 1970s it is clear that applications of computer techniques and electronics are going to complement mechanical and manual techniques to a wide extent. The "new combined techniques" will be related to changes in work organization in the direction of socio-technological applications. It is even possible to foresee changes in vocational theory and general knowledge as a consequence of new demands during the "third epoch" of industrialized society at the end of this century.

Keywords: Education, vocational education, vocational training, modes of instruction, socio-technology, science education, vocational system, history of education.

C. Reflections on future trends in the development of the vocational school system and vocational education

In this final section we are going to speculate on how vocational schools and vocational education are likely to change during the last two decades of this century.

From our historical review we have discerned some main features which can be of relevance in making assessments about the future.

1. Every enlargement of the vocational school system (in terms of new buildings, new equipment and reorganization of the school system) has during the present century been accompanied by increased state financial support.

The new committees concerned with the reorganization of vocational education during the 1970s have been asked to make proposals which do not entail any new increases in financial support. This is the case for the 1976 Committee on the Reorganization of the Secondary School System (gymnasieutredningen), the 1978 Committee on Adult Eduction at the Local Level (Kom Vux-utredningen) and the 1979 Committee on Retraining for Adult and Vocational Training in Industry (arbetsmarknadsutbildning och utbildning i företag).

The consequences of these financial restrictions are that firstly the three different forms of vocational education will have to cooperate in order to keep down costs; and secondly that the three parts of the vocational school system will have to cooperate with employers and employees in the total labour market in order to create new opportunities for using the facilities available in factories and institutions and for utilizing educated people and skilled workers as instructors in practical skills and vocational theory in the workplace. This second consequence will compel representatives of the state (the school system), the Swedish Employers Confederation and the Swedish Confederation of Trade Unions and the students' organizations to negotiate new relationships and mutual responsibilities for vocational education.

During the 1980s we can look forward to a new type of general agreement between the organization of the labour market and the state and the students' organizations. This has some similarities to what occurred at the beginning of the 1940s.

2. We have established that the development of vocational education during different phases has been related to the introduction and application of new techniques of skills training.

During the second phase vocational education included practical skills. During the 1920s and the 1930s manual techniques were dominant and the work was organized along craft lines. During the last part of the 1930s and especially during the 1940s and 1950s mechanical techniques had a successively greater influence on training in practical skills.

3. The change in the social organization of working life towards applications of sociotechnical principles can also be looked upon as a tool in the creation of a democratic work organization.

Obviously this change does not automatically result in a democratic orientation but the change offers an opportunity for such a transition.

On the basis of an historical review it is possible to see that while the organizational structure during the second epoch of industrialization created economical welfare, it also served to diminish personal relations in work situations.

Future directions are to a large degree an open question, and whether new techniques in combination with a change in social organization will or will not produce a new form of integrated economic and social welfare depends upon the organizations in the labour market.

4. Another main feature of the 1976 directives is an attempt to achieve structural equity between men and women in the labour market. In order to avoid a situation in which the choices made by young people continue to follow the dictates of tradition it seems necessary to create compulsory practical periods on the labour market during secondary education. These compulsory practical periods would be designed to give females experience of working in male-dominated fields of work and to give males experience of working in fields in which females have up to now been preponderant.

From an historical point of view we can say that during the last 30 years it has been possible to achieve a balance between the educational opportunities available in urban and rural areas. But political reforms have not succeeded in bringing about changes in the kind of education which, it had been predicted from a socio-economical point of view, pupils would be involved in at secondary school level.

The next step in reform is to create an integrated education for all young people consisting of both academic and practical orientation. This can also be seen as a way of creating full employment for young people. It is nonetheless clear that economic prosperity cannot bring about a substantial increase in job opportunities for young people. The only way open seems to be to create a combination of periods of education and periods of practice on the labour market.

5. The transfer of knowledge between the young generation and skilled workers and educated people in other working positions will be another, though not entirely new, task in the effort to enrich everyday working life during the fourth phase.

Behind the new structural reforms which we can look forward to during the 1980s we can distinguish the following rationales: First we find the fundamental aim of developing the country as an industrialized nation. Then we also find a continuation of the labour market orientation towards a general effort to create and maintain full employment.

The democratic traditions embodied in the 1918 and 1968 structural reforms will continue and efforts will be made to use sociotechnical principles to develop a democratic work organization.

Additionally, equality between men and women on the labour market will create new structures in the school system at the secondary level.

Appendix II

Abstract of the study by Mr. Rune Axelsson:

"Upper Secondary School in Retrospect. The view of former students." University of Uppsala, 1989.

A. The vocational value of upper secondary schooling

The focus now shifts to the value of upper secondary education as a preparation for vocational activity.

1. Results of the evaluations

I observe here that, not surprisingly, the young people in the evaluations rated vocational subjects higher than general subjects as a preparation for vocational activity. There were differences between groups with different social backgrounds concerning their appraisal of the value of school subjects as preparation for vocational activity. Among those who took three- and four-year courses, a smaller proportion were positive about preparation at school for vocational activity than about the preparation given for further studies. This, finally, is interpreted as a complementary reflection of one of the criticisms often expressed in the interviews, that upper secondary education was too isolated from working life.

Most of the two-year vocational courses' timetables are dominated by a single course-specific vocational subject. This includes work technique and occupation-related theory. On some of these courses, however, the timetable includes several vocational subjects.

Very many of the young people who had taken vocational courses found vocational subjects more valuable than other subjects (Axelsson, 1977a, p. 100). The results suggest that the proportion positive in UTYRK85 was lower than in UTYRK75 (Axelsson, 1986a, p.113). In UTYRK85, however, the questions pertaining to vocational subjects in the questionnaire were made both more detailed and more general than in UTYRK75: more detailed, since a distinction was made between "work experience" and "vocational theory", while in UTYRK75 the question concerned "vocational subjects"; more general, since the alternative answers were "very good, quite good, quite poor, very poor" whereas in UTYRK75 they were "very valuable, quite valuable, not particularly valuable, of very little value". In my opinion an assessment of good or poor includes the whole educational situation; an assessment of valuable or otherwise pertains more specifically to the subject's importance for subsequent vocational activity. In a judgement that is more specific as regards the object assessed and more general as regards the assessment categories available the result may very well be less favourable. I thus assume that in this case the differences between UTYRK75 and UTYRK85 are largely due to the different ways the questions were framed.

In UTGY, students were asked if the various subjects had been of value to them as preparation for vocational activity and for subsequent study. On these points answers were only elicited from participants who had been gainfully employed or studied, as relevant. In the present questionnaire question, therefore, I have used the alternatives "of value" and "not of value to me in employment" and the corresponding alternative answers in the question about higher education. I think that the essence of this is an assessment of the subject's existence on the timetable and also, primarily, of the knowledge retained by students of the subject concerned (Axelsson, 1982, p.238).

The number of periods per week added together over the entire course differs for different subjects. It is reasonable to suppose that a subject is perceived to be of more or less value because it is a more or less dominant subject on the timetable (Axelsson, 1982, p.238). Here, though, I would make the reflection based on the results of UTYRK75, that one cannot automatically draw the conclusion that more time for a subject also means that it is valued more by students. At the time of the follow-up

in UTYRK75 the consumer studies course, the distribution and clerical studies course and the nursing course had a greater number of periods of Swedish per week than other courses. The former students in this group were indeed on average more positive about Swedish than those who had taken other courses. But the nursing course ranked way down on the list when it came to attitudes to this subject (Axelsson, 1977a, p.203).

Let us return to UTGY. The result concerning vocational subjects only applies to the economics and engineering courses of the various three- and four-year courses, as the proportions of students on the other theoretical courses who had studied any vocational subject were too small (Axelsson, 1982, p.247). Not surprisingly, attitudes were more positive to vocational subjects than to other subjects as regards preparation for vocational activity. Other subjects can be ranked in order of how appreciated they were as preparation for vocational activity; most appreciated were Swedish and English, after that mathematics, then social studies subjects, languages other than Swedish and English, general science subjects and, finally, regarded as a group, physical education, music and art. Within single courses attitudes were more favourable towards what is called the "character subject", ie. the key or core subject of the course, than towards other subjects. Most of the subjects were judged more positively by former students on three- and four-year courses than by those on two-year courses and more favourably by two-year theoretical course students than by those who took vocational courses (Axelsson, 1982, pp. 247-249).

Concerning attitudes within groups with different social backgrounds on the vocational courses, it may be of interest to note that participants with a higher civil servant background held more positive views of the value for vocational activity of Swedish, English and mathematics, while they were the least positive about vocational subjects and physical education, music and art. Vocational subjects and physical education, music and art were the subjects considered most valuable by those with a skilled worker background (Axelsson, 1982, p. 254.).

Several of the interviewees who had taken theoretical courses stressed that their education had not given them any vocational preparation. Post upper secondary studies had been necessary. Many regarded this as a drawback. The proportion going directly into employment was not small. These people had then not had any introduction to the world of work. School had been a secure world; students were used to the study situation. But they gained no experience of working life. School was too isolated. They would have liked to have a greater link with working life (Axelsson, 1982, p.277)

Among those who had taken three- and four-year upper secondary courses, the proportion positive to their preparation for vocational activiity was smaller than the proportion with a favourable view of their preparation for further studies. I have interpreted this as a complementary expression of one criticism often voiced in the interviews that education was too isolated from working life. Critically, interviewees viewed school as a world apart. There they could certainly feel at home, they were familiar with the routines, but it became an activity for its own sake. These young people strongly stressed their desire for school to open up to the community and the present. They wanted concrete experiences of working life. What they above all called for were lengthy periods of work experience in a number of possible areas of future gainful activity, with support and guidance from school. One goal set out in the curriculum for upper secondary education, that it prepare students for vocational activity, does not seem to be achieved to a sufficient degree (Axelsson, 1982, pp. 213, 238, 278f.).

B. Workplace-located upper secondary school education

Certain segments of upper secondary school vocational education are provided in places of work outside schools. My follow-up studies looked into students' views of this education. Below, I give some of the results and examine related research.

1. Results of the evaluations

The questions raised here about workplace-located education concern its extent and value, contact between school and workplace, motives for this education and criticism of it.

Some of the education provided at upper secondary school is located in workplaces outside the school. According to the follow-up participants' own reports, workplace-located education forms part of all vocational courses, but to a varying extent. The proportion of young people who had received such education was greater in UTYRK85 than in UTYRK75. Its length, however, was not found to have increased in UTYRK85 compared with UTYRK75. Only when the length of workplace-located education exceeded eight weeks were a majority satisfied with its duration; most of the others wished that they had had more. They were very positive about the benefits of this education. Its benefits were assessed in more positive terms by those who at the time of the follow-up were working within the competence area relating to the course which they had taken. The majority of former students who had not received this type of education wished that they had done so. Thirty per cent of those who had received workplace-located education were not contacted by teachers from their school during the period in the workplace (Axelsson, 1977a, pp. 68ff.; 1986a, pp.81ff.).

Attitudes were thus very favourable, though this does not mean that the young people I interviewed did not voice any criticism at all. Contact between school and workplace was sometimes poor; interviewees referred to deficiencies in monitoring of attendance and checking whether students were given meaningful work to do; some pointed out that the experience gained was turned to poor account in the school's teaching; stress in workplaces had the effect that students could not always obtain the information they wanted; school teaching and planned experience of working life were badly synchronized; students were sometimes given jobs to do that were meaningless from the point of view of their education; they were sometimes used as cheap labour (Axelsson, 1977a, pp. 79-97).

Students are very keen, then, on having workplace-located education. In the interviews in UTYRK75, several reasons were given for this; students gain an indispensable contact with the world outside school; their step out into the job market is prepared and is easier to take when the time comes; it is possible to give education a local profile. Working life is an immense teaching aid, an educational resource with rich potential for all school subjects. The contact between school and working life becomes a stimulus for both, a challenge to renewal. Working methods, equipment, social relations in the workplace, working environment - physical as well as psychological - worker safety - all this is made more tangible. While still at school, young people can in workplaces objectively observe, question and shape their own values. Schools can encourage this to happen, and follow it up in discussions and debates.

The school's role in workplace-located education is vital: to prepare, and to follow up. Without this, such education strays from its objectives. The main responsibility ought to rest on schools; it is a matter of education. In the workplace it is important that young people are given a wide variety of work to do, work that makes sense from the viewpoint of their education (Axelsson, 1986a, p. 97).

Appendix III

The National Swedish Board of Education - Information Section (From the curriculum for the integrated upper secondary school)

Time schedule - two-year manufacturing line

Subject	Hours per week in grade			
	1	2		
		Sub-alternative Se, St & Re	Sub alternative Bk	Sub-alternative Ch
Swedish	4			
Orientation on labour market	1	1	1	1
Food manufacturing	30-27	35-32	35-32	35-32
Physical education	2	2	2	2
Time a free disposal	1			
English }				
B or C language }				
Religious knowledge }				
Psychology }				
Civics } [1]	3	3	3	3
Consumer education }				
Mathematics }				
Music or Art }				
Total	38	38	38	38

[1] Within the frame of three hours per week the pupil has to choose at least one of these subjects in accordance with the time table and the syllabus for the subject in the same grade in the two-year economical, social or technical line

Term	Line structure				
4	Sub-alternative for service technic (Se)	Sub-alternative for catering (St)	Sub-alternative for restaurants (Re)	Sub-alternative for bakers & pastry making (B)	Sub-alternative for butchers (Ch)
3					
2			Common studies		
1					

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Time schedule - two year motor engineering line

Subject	Hours per week in grade		
	1	2	
Sub-alternatives B, M, R[1]	Sub-alternative Aircraft		
Swedish	4		
Orientation on labour market	1	1	1
Motor engineering	30-27	35-32	35-32
Physical education	2	2	2
Time at free disposal	1		
English } B or C language } Religious knowledge } Psychology } Civics }[2] Consumer education } Mathematics } Music or Art }	3	3	3
Total	38	38	38

[1] B = motor mechanics, M = mechanical engineers (forestry, agriculture, construction machines. etc.) R = spares personnel

[2] Within the frame of three hours per week the pupil has to choose at least one of these subjects in accordance with the timetable and the syllabus for the subject in the same grade in the two-year economical, social or technical line.

Term	Line structure			
4 3	Sub-alternative for motor mechanics	Sub-alternative for mechanical engineers	Sub-alternative for spares personnel	Sub-alternative for aircraft mechanics
2		Common studies		
1				

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Time schedule - two-year workshop technical line

Subject	Hours per week in grade		
	1	2	
		Sub-alternative V & P-S[1]	Sub-alternative J[1]
Swedish 4			
Orientation on labour market	1	1	1
Motor engineering	30-27	35-32	35-32
Physical education	2	2	2
Time at free disposal	1		
English }			
B or C language }			
Religious knowledge }			
Psychology }			
Civics }[2]	3	3	3
Consumer education }			
Mathematics }			
Music or Art }			
Total	38	38	38

[1] V = Workshop mechanics; PS = Metal & weld mechanics; J = Steelmill trades

[2] Within the frame of three hours per week the pupil has to choose at least one of these subjects in accordance with the timetable and the syllabus for the subject in the same grade in the two-year economical, social or technical line.

Term	Line structure			
1	Sub-alternative V	Sub-alternative PS	Variant for heavy platework	Sub-alternative steelmill trades
2				
3		Common studies		
4				

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Two-year workshop line

Admission requirements

Leaving certificate from grade 9 of compulsory school (or equivalent)

Structure of studies

Grade 2	Workshop Mechanics Branch	Metal workers and Welders Branch	Heavy plate Variant	Steelmill Trades Branch
Grade 1		Common course		

Description

Instruction during the first year is the same for all students, its purpose being to acquaint all students with the occupations represented by the three branches in grade 2.

Prior to grade 2 each student opts for a particular branch as indicated above.

A compulsory option (see time schedule) enables the student to choose, according to personal preference, a theoretical subject to be taken for at least one school year.

A student taking the instruction and activities compulsory for this line and the branch opted for thereby takes a complete course of studies.

A student can also take one or more subjects over and above the complete course of studies, in which case he or she is said to take an augmented course of studies.

A student having appreciable difficulties in one or more subjects can be exempted from not more than two compulsory subjects, in which case he or she is said to take a reduced course of studies.

Time schedule

Subject	Total no. of lessons		
	Grade 1	Grade 2 Vm & Pm	Jb
Swedish	160	-	-
Working life orientation	40	40	40
Workshop techniques[1]			
Work technique	880[2]	1120[2]	920[2]
Vocational theory	200	160	360
Physical education	80	80	80
Reserve period[3]	40	-	-
Optional subject (compulsory)			
English }			
B or C language }			
Religious knowledge }			
Psychology }			
Civics }[4]	120	120	120
Consumer education }			
Mathematics }			
Music or drawing }			

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Vm = Workshop Mechanics Branch
Pm = Metal Workers and Welders Branch
Jb = Steelmill Trades Branch

1 Workshop techniques includes the following:

Grade 1
Drawings, Science of materials, calculations, tools and machinery
Bench work
Measurement
Grinding
Lathe work
Milling
Brazing, gas cutting, hot bending, heat treatment
MMA welding
Sheet metal fabrication

Grade 2

Vm - Workshop Mechanics Branch
Work preparation, work studies, interpretation of drawings, choice of right working method and machinery,etc.
Bench work
Measurement
Lathe work
Milling
Grinding

Pm - Metal Workers and Welders Branch
Work preparation, work studies, interpretation of drawings, choice of right working method and machinery, etc.
MMA welding
Gas-shielded arc welding
Brazing
Gas cutting and gas welding
Mechanized sheet metal fabrication
Bending and straightening
Erection and jointing
Gp - Heavy Plate variant
Gas cutting
MMA welding
Mechanized welding
Sheet metal fabrication
Bending and straightening
Erection
Interpretation of drawings - plate rolling
Work preparation, sheet metal
Practical heavy plate welding

Jb - Steelmill Trade Branch
Manufacturing processes (in-plant instruction outside the school)
Production engineering
Electrical engineering
Automatic control techniques

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2 The number of periods allotted may vary according to the optional subject taken in grades 1 and 2 and a possible free option in grade 2.

Free option implies that the student may exchange a vocational subject for a subject belonging to another line or branch. For example, a student taking English as an optional subject in grades 1 and 2 can acquire general eligibility for post-secondary studies by taking Swedish for 3 periods per week (120 lessons) as a free option in grade 2.

3 Reserve periods are applied to purposes not having a direct bearing on any of the other subjects included in the line of studies, Examples: educational and vocational orientation, industrial and social affairs, cultural questions

4 At least one of these optional subjects has to be taken for up to 3 periods a week for at least one school year. The student may exchange the optional subject for work techniques during one of the two grades.

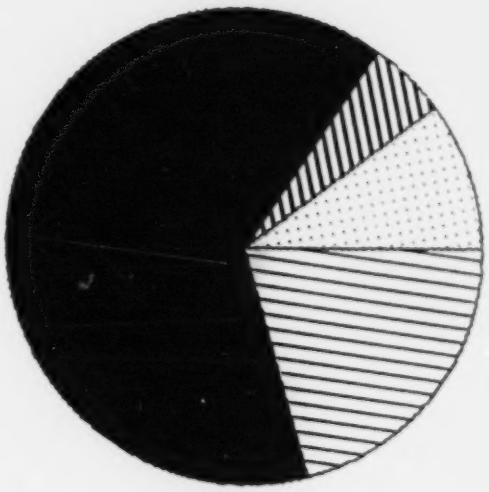
B language = German or French when taken by the student at compulsory school

C language = a foreign language first studied at upper secondary school - German or French (Finnish in certain cases)

Note: The time allocations given in the time schedule refer to the total number of lessons for 40 working weeks per grade.

Further remarks. The net number of lessons will be smaller due among other things to the loss of time entailed by public holidays, days off, etc. The number of periods is also affected by the optional subjects chosen by the students; cf. note 2. For these various reasons, the exact loss of time cannot be computed.

Content



Distribution of subjects in grade 1

The pie chart shows the time allocations for different subjects in grade 1. The time allocation for the characteristic subject of this line, workshop technique is increased in grade 2 (see time schedule). Efforts are made to integrate the various subjects.

PE = Physical education; Res. period = Reserve period

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The characteristic subject of this line is **workshop techniques** which comprises work technique and vocational theory as indicated in the time schedule.

In their studies of workshop techniques the students learn, for example, to use, maintain and care for various tools and machines, and they also study the properties and uses of different materials. Thus they learn the construction, names and uses of tools for bench and machine work. They perform elementary grinding, turning, milling, plate work, brazing and welding operations and in this connection they learn the use of various measuring instruments and study different methods of measurement.

In the practical part of their instruction the students form various groups to deal with assignments aimed among other things at giving them practice in the team work which occurs at a workplace. They are enabled to try their hand at being "safety delegates", taking charge of tools, machinery, facilities and so forth.

A. Workshop Mechanics Branch in grade 2

This branch gives students an opportunity of deepening and broadening their knowledge of different tools and machines used for turning, milling, grinding, drilling and other operations. They also receive instruction in bench work, assembly work, quality assurance and measuring techniques. Some of this work can be devoted to external orders.

B. Steelmill Trades Branch in grade 2

Work technique instruction in this branch takes the form of in-plant training in the production department of a steelmill. In some localities this in-plant training can take place in metal manufacturing firms, in which case it prepares the student for metalworking trades. To make their training as comprehensive as possible, the students circulate between various work points within the enterprise. The purpose of this training is to broaden the students' knowledge of the production and fabrication of iron, steel and other metals. Tasks include the planning and supervision of different manufacturing processes, the operation and maintenance of equipment (eg. furnaces and rolling mills) and the testing and inspection of material. Subject to special permission, students can try their hand at shift work.

C. Metal Workers and Welders Branch in grade 2

Students taking this branch receive further instruction in mechanical sheet metal fabrication, hot and cold straightening, MMA and gas-shielded arc welding, gas cutting, brazing and braze welding, and the use of various machines, aids and tools for erection and jointing.

This branch also includes a heavy plate variant in which work technique instruction takes place on the premises of firms in the trade and the students gradually build up their skills by circulating between various work points.

D. Marks

Marks are awarded for all subjects except where otherwise indicated. No marks are awarded, however, for working life orientation. Instead a note is made to the effect that the student has "participated". Marks are awarded on a five-point scale, five being the maximum award.

Appendix IV

Finance

The AMU Group as a whole is now self-supporting and funds its activities entirely from revenues. When introduced in the mid-eighties, it marked a departure from traditional Swedish administrative practice.

The aggregate present turnover of the AMU Group exceeds SEK 2.5 billion (approximately US$ 440 million). It employs some 5,300 people and encompasses 100 training centres.

Yet AMU recognizes the need to further enhance productivity and efficiency in order to increase profitability. Its mandate clearly spells out the need for efficient training programmes. One measure of AMU's success is that the number of trainees who have attained employment after completed training has gradually increased. Yet efficiency and training results are sometimes difficult to measure, partly because the training itself differs with local conditions, student background and technical equipment. However, in spite of these difficulties there are means of achieving greater efficiency. Staff cost is one such area and MU has gradually succeeded in reducing the number of staff on its payroll. It has also reduced the number of buildings it occupies, thus lowering its rental costs.

It is crucial that AMU continues to seek ways of reducing costs over the coming years. An ambitious programme has therefore been launched to achieve greater efficiency. The National Labour Market Board annually receives a budget allocation to purchase training services. These funds are subsequently allocated to Regional Labour Market Boards according to needs. The regional boards are not forced to use the services of the AMU Centres but are actually free to acquire the training service which best meets needs. There are a number of competitors, such as universities, secondary schools, industry and private educational institutions.

In spite of the fact that the public Labour Market Boards traditionally have been major customers of AMU's services, the Boards have recently increased their purchases of training services from other suppliers. AMU is determined to restore its high share.

Notwithstanding its ambition to raise its "public" share, it is equally important for AMU to market its training services to the private sector. Here, AMU has seen a steady growth in its non-governmental business abds that share is presently one-tenth.

AMU is highly concerned with quality and it has set ambitious goals, It is imperative that trainees and customers alike are satisfied that they are getting value for time and money. In 1989, AMU started regular surveys to monitor customer satisfaction. Survey results should help improve the training programmes. Each regional AMU agency must set real targets to reduce the drop-out rate.

In personnel management, AMU has set aside five per cent of its turnover for staff development. Among measures taken are to provide practical work training for all teachers and trainers at least every other year in order to ensure competence. Additionally, newly-employed staff must partake in training aimed at raising their teaching skills.

A long-term financial plan will ensure continued and enhanced profitability. Each division should at least achieve break-even in its operating costs. Furthermore, each division - such as Labour Market Board Sales and Private Company Sales - is expected to bear its direct costs as well as its share of indirect costs, planned depreciation, and staff and product development costs. They are also expected to help generate profits.

If profits exceed five percent of turnover each regional AMU agency may retain that revenue until such time as a reserve of 15 per cent is obtained.

The AMU Group strives to cover all of its costs but does not seek to achieve maximum profit. Over a certain limit, the Government decides on the utilization of profits and, conversely, it is also responsible in cases of losses as bankruptcy is not an option.

Training policy

The AMU Group has set high targets - to excel in vocational training for adults. Successful training and completed AMU courses should always result in employment opportunities. To achieve this high ambition, AMU must continuously adapt to changing environments, to develop innovative training programmes and cater to the needs of each individual student. Students and employers have a right to training which is tailored to differing needs. Thus, at AMU Centres there are no semesters or classes and admission takes place throughout the year.

The AMU Group is not, as previously mentioned, restricted to publicly subsidized training. At market rates training programmes are available to all. It also coordinates programmes with other educational institutions in order to provide specific training packages for industry and commerce.

In general, AMU training courses are carried out at a level which corresponds to upper secondary school. Whereas a complete course might lead to full skills in a new profession, shorter courses offer supplementary skills in a particular area. Courses are regularly adjusted in both length and level of knowledge to best suit the needs of the customer and can stretch from one day to more than one year.

For students with insufficient basic education, AMU can provide courses in such subjects as Swedish, mathematics and foreign languages. this training is vital since it offers a chance for those least equipped to become competitive on the labour market.

A so-called module system has been successfully developed by the AMU Centres. A course is split into short sections which can be individually combined to suit the student's former experience, aptitude and his or her prospects of attaining work after completed training.

Overall curricula, as required by Labour Market Boards, are established by the central AMU Board. However, regional AMU's are free to adapt these by adding or subtracting modules. Experimental courses can also be established locally.

Nearly 400 different curricula have been developed by the AMU group in close consultation with the parties on the labour market. AMU has also established special bodies, "Curricular boards", to examine and develop curricula and each major occupational field is represented. These boards, which are constituted as tripartite bodies, closely follow trends and try to ensure the courses reflect changes in the profession.

Further information can be obtained from:

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